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IN THE  
**Supreme Court of the United States**

OCTOBER TERM, 1945

No. **370**

NATIONAL ELECTRIC PRODUCTS CORPORATION,

*Petitioner,*

*v.*

TRIANGLE CONDUIT & CABLE CO., INC.,

*Respondent.*

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**PETITION FOR WRIT OF CERTIORARI  
AND SUPPORTING BRIEF**

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October Term, 1945

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No.  
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NATIONAL ELECTRIC PRODUCTS CORPORATION,

*Petitioner,*

v.

TRIANGLE CONDUIT & CABLE CO., INC.,

*Respondent.*

**PETITION FOR WRIT OF CERTIORARI**

TO THE HONORABLE, THE CHIEF JUSTICE AND THE ASSOCIATE  
JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

Petitioner, National Electric Products Corporation, respectfully asks that a writ of certiorari be issued directed to the United States Circuit Court of Appeals for the Third Circuit to review the judgment of that court which was made finally effective by denial of a petition for rehearing on May 28, 1945 (Rec. 498, 502).

A certified transcript of the record in the case has been filed.

**Summary Statement of the Matter Involved**

This is a patent case in which petitioner is the patent owner and respondent is the infringer. In question here are Robinson & Moore patents Nos. 2,222,555 and 2,222,556. Because the second issued on the same day as the first,

and covered a specific form of the first, the two patents were treated as one, according to settled law, and will be so treated here. Both were held infringed but invalid.

What is patented is a combination of old elements by which an improved product was created. The court below accepted the fact that the new combination solved a problem which the active efforts of the art had not been able to solve in twenty-five years and which had stood in the way of having this wanted product. Judge Parker, dissenting, said that "there can be no doubt as to its patentability" (Rec. 494). Even the majority seem to have viewed the step which solved that problem as a "flash of genius."

The majority of the court below nevertheless held the patents invalid because, *viewing them as representing a new use of an old instrumentality*, it subjected them to an all-preclusive rule *that the new use of an old thing is not patentable* (Rec. 491). Consistent with that supposed rule, the court did not adjudge the question of invention—that is to say, the question whether the new use and resulting new product were within or beyond the reach of ordinary skill. It accepted as true, but put aside as being immaterial, all of the facts which have probative force on that question, including facts with respect to the inability of ordinary skill to solve the long standing problem and with respect to the differences in problem and in known purpose and effect between the new use of the instrumentality in question (one element of the patented combination) and its former use in association with different elements. Differences between the thing with which the instrumentality was formerly used and that with which it is used in the patented product likewise became immaterial under this supposed rule, which pre-supposes differences in that respect for otherwise it would not be a "new" use. As the inevitable consequence of these errors, the majority held the patents anticipated and invalid.

The view that the patented combination represents a new use was injected by the Court of Appeals below, neither party having presented the matter in this aspect. That view of it can not be said to be improper, although it is unusual. The sense in which it is proper is important. It involves a new use in the sense that the combination of an instrumentality with a subject with which it had not before been associated is indeed a "use" of it, and the subject being a different one, it is a "new" use of the instrumentality. In the same sense, of course, almost every new combination is a new use of any of its component elements.

The matter involved is the question whether, in such an instance of "new use," there is a preclusive rule making the new product unpatentable without more; and, specifically, whether patentability is to be determined by a *rule* precluding any inquiry into the question of the inventiveness of the new use by which the new product was created, or whether it is to be determined by a *judgment on the question of invention*, in the light of the whole evidence and the criteria fixed by this Court for such a question.

No question is raised as to the standard of invention. These patents present a classic case of invention under any standard, new or old. This is sufficiently shown by the dissenting opinion of Judge Parker which alone adjudged the question of invention, and also by the opinion of the majority who seem to have thought it a "flash of genius," but unpatentable under the supposed rule (Rec. 491).

This particular factual pattern of "new use," of the new combination species, has been presented in the past. Decisions sustaining patents for such new uses (*e. g.*, *Western Electric Co. v. LaRue*, 139 U. S. 601) establish the absence of any preclusive rule and the true determi-

nants of patentability. Those determinants appear most fully, in recent times, in the opinion of this Court in *Paramount Publix Corp. v. American Tri-Ergon Corp.*, 294 U. S. 464, which recognized no preclusive rule but on the contrary marked out the inquiries that are necessary and the facts that are material to a determination of it as a question of invention on the evidence. The same principles have been expounded with especial care by Judge Learned Hand in a series of decisions in the second circuit, with which the present decision is in direct conflict.

### **The Subject of the Patents**

As an industrial product, what is patented is an improved form of electric wire of the kind used in the wiring of buildings. No one pretends that it had existed before. In statutory terms, it is a "new and useful \* \* \* manufacture \* \* \* or new and useful improvement thereof," and the proper question is whether it fulfills the other statutory requirement that it be "invented or discovered" (35 U. S. C. § 31; *post*, p. 28, appendix). It is a combination of three chief elements, *viz.*:

1. A conductor of electricity and its insulation, conventionally copper and rubber, respectively;
2. A fibrous protective jacket around the rubber insulation to protect it and to serve as a base for coating compounds whose office is to exclude air, moisture and light, the agencies that attack rubber and cause short circuits by impairing its insulating quality; the special form of jacket here being a so-called "serving of threads," *i. e.*, a jacket formed by wrapping a number of *threads* around the insulated wire with their turns side by side, *without overlap*, to give substantially complete coverage of the rubber; and



3. A locking structure consisting of *spaced* turns of thread, preferably of rayon or nylon, wound in the opposite direction over the serving of threads at an angle of about  $60^\circ$ , and acting to keep the turns of threads in the serving from spreading apart and rupturing the coatings when the wire is severely bent, as in a kink.

The accomplishment was that it became possible for the first time to employ the "serving of threads" as the protective jacket on a rubber insulated wire. The serving was well known, and had had some use on bell wire and magnet wire, but it could not be used on rubber covered building wire because it was unsafe. Such a wire has to be flexible and inevitably gets twisted or otherwise severely bent, as in a kink. Kinking generates forces which cause the turns of thread in a serving to spread apart and to be forced down the sides of the kink from its apex—a sort of wedging action. Such spreading ruptures the protective compound layers, exposes the rubber to destructive agencies and leads to short circuits. A home would not be safe with such a wire in it. The Underwriters refused to approve its use. Standard practice for years therefore was to use a braided jacket, the interlaced threads of which gave a self-sustaining fabric.

But the art wanted very much to use the "serving" because it is considerably less costly than a braided jacket. Using less cotton, it gives better coverage in its single layer than does the braid with its multitude of thread cross-overs leaving little spaces between. The serving can be put on much faster; one serving machine does the work of four braiders. The serving gives a smaller diameter and a smoother surface. While not as resistant to abrasion as a braid, it is amply strong, the braid being stronger in that respect than is needed.

The art knew all of the advantages of the serving. Under the potent incentive of its known economy, it tried

to find a way to keep its turns from spreading apart under kinking forces so that those advantages could be realized. No one thought of using an outer thread counterwound in spaced turns at the right angle, or ever conceived that a simple thread could have the capability of keeping the serving intact against the forces induced by kinking.

Three particular efforts at solution were proved, in 1913, 1924 and 1930; all unsuccessful. Most striking was that of Western Electric Co. in 1924. That company, in its manufacture of telephone wire, had the special incentive of wanting to use the serving in order to develop a continuous wire-making process in which the application of the fibrous jacket could keep pace with the application of the rubber and of the outer compound layers. The braider was too slow to fit into this process. All the Western Electric engineers could think of was to try to make the turns of the serving adhere to the rubber. They worked on various adhesives and finally developed and patented a way of vulcanizing the rubber, after applying the serving, in such a way as to get an adhesion of thread to rubber. But none of these solutions was acceptable or was used.

Robinson & Moore discovered the idea of the locking thread in 1937. After obtaining the necessary approval of the Underwriters' Laboratories, based on complete tests to establish its safety (Rec. 397-415 esp. 402-3 and 413-415; and compare 395-396 describing tests which a serving without a locking thread had failed to pass) petitioner put the wire on the market in place of the braid jacketed wire. Respondent learned of it and adopted it promptly (Rec. 156-7); hence this litigation. Three other wire companies, comprising with petitioner some 25-30% of the industry, took licenses. The experience of all demonstrates that the locking thread does the job, that

the expected economies of the serving are in fact realized, and that the long standing problem has been solved.

The known existence of the problem, the inability of the art to solve it, and its successful solution by these patentees were fully accepted by the court below. (See the majority opinion at Rec. 486-488 and the dissenting opinion at Rec. 492-493, both of which rest on the same facts.)

The opinions do not describe how the combination works, but there likewise is no dispute in that regard. When the wire is straight or but moderately bent, the serving remains intact and needs no keeper. It is self-sustaining. The action of the outer helical thread comes into play when the wire is severely bent or twisted, as in a kink. Under the influence of the bending, it exerts a clamping or locking action on the turns of thread in the serving, holding them against the rubber which furnishes the reacting force. Why the turns of the locking thread, which is but a fraction of another serving, are not themselves spread apart as the serving threads are when not so locked, we can not explain. Some complex of interacting forces is set up, the net result of which is to keep the whole covering intact so that no damage is done.

### **The Former Use**

The use of a helical thread had been known in the industry,—“common practice \* \* \* for ages”, as one witness put it (Rec. 76)—, but never in combination with a serving of threads, or with anything analogous to it in the sense of presenting a like problem of spreading apart under forces generated by bending, or with anything that demonstrated the capability of a helical thread to perform its special office in the present combination. The discovery or conception of that capability, and its translation into practical form in the patented combination, were the inventive act.

Formerly, a helical thread was used only as a simple tie, like any string used to hold together a bundle of things that tend to tumble apart or unfold of their own accord. The particular example shown was the British Patent of Roberts, No. 242,911 (Rec. 322-324) which describes a power cable having a heavy copper conductor surrounded by two layers of thick paper insulation and an outer sheath or armor of lead. Such a cable can not be kinked or severely bent and, as the court below found, does not involve the same problem (Rec. 490).

Roberts wound a helical thread around each of his two layers of paper insulation. Each layer consists of some fifteen *flat strips* of heavy paper laid on the conductor at an angle approaching parallelism with its axis; not exceeding  $11^{\circ}$ . Each paper strip *almost completely overlaps* its fellow, to build up the thickness of the insulation. The outer lead armor holds the strips and layers of paper in place.

Roberts does not say what the helical threads are for, save as he calls them "bindings" and says they separate the respective layers. They have no purpose or effect as bindings in the finished product, because the lead armor holds everything in place. However, their effect and presumable purpose as bindings is plain enough in the light of the common practice of using a binder thread in similar situations in cable manufacture. An assemblage of bunched strands, generally longitudinal in lay like Roberts' overlapped strips, are brought together and laid in place in one operation, and the continuous outer sheath or armor is put on in a succeeding operation. In between the two operations, if there were nothing to hold them, the bunched strands would "bulge out like a balloon" (Rec. 76). In Roberts, as will appear from Figure 2 of the patent (Rec. 324), there would be a tendency for the overlapped strips to unfold sidewise of their own accord, i. e., outward from the cable, somewhat

like the pages of a rolled up magazine. It presents a simple problem of bundling. To prevent such disarray, the binder thread is wound on to hold the bundle together until the lead sheath is put on, a transient purpose unrelated to any bending of the cable. Separate ties every foot or so would do, but a continuous string wound on helically is simpler to apply.

It is evident at once (1) that the *flat, overlapped strips* of Roberts' *insulation* are not concretely the same physical thing in structure or purpose as the *non-overlapping threads* of a serving used as a *jacket* for rubber insulation; (2) that the two products are different industrial things, namely, heavy power cable and flexible building wire; (3) that the problems involved in the two uses of the helical thread are of an even more different character in that the over-lapped strips tend only to unfold or bulge out sidewise of their own accord, and when the cable is straight, whereas the threads of the serving have no tendency at all to do that, for they hold themselves in place when the wire is straight or moderately bent but are forcibly spread apart *along the wire* under the wedging action set up by a sharp bend or kink; (4) that the problem dealt with by the Roberts' thread exists only during a stage of manufacture, while the different problem posed by the serving of threads arises under conditions of use of the finished product; and (5) that the Roberts' thread acts by simply containing the bundle of bulging strips, while the locking thread of the patented combination acts by a positive clamping or clinching force induced by the same bending which generates the spreading forces it opposes.

Differences in structure, in function and in purpose of use stand out. The point of identity is that each structure employs a helical thread as one element. It is in that sense that the difference can be summarized as being, in the case of the patented combination, a new use of the

helical thread resulting in the improved wire product of the patents.

The proper question posed by these facts is this: was it within the reach of ordinary skill, or beyond it, to think of using the helical thread as the thing that could keep the turns of thread in a serving from spreading apart upon kinking? Did use of a helical thread for the transient purpose in cable manufacture, as exemplified by Roberts, reveal its capability of doing what it does in the patented combination? Looking at it from the standpoint of the inner structure, was the serving of non-overlapped threads used as a jacket on a rubber insulated wire so analogous to the Roberts insulation of overlapped paper strips, in terms of problem presented and work to be done, as plainly to indicate that the helical thread was the thing to use to meet the problem of the serving?

#### **This Court's Rule**

The pertinent proposition was stated by this Court in the *Paramount* case, 294 U. S. 464 at 473, in relation to a new use of a process step. We take it that the rule can be no different for a new use of a mechanical device or expedient. This Court said: "The application of an old process to a new and *closely analogous* subject matter, *plainly indicated* by the prior art as an *appropriate subject of the process, is not invention.*" (We emphasize the words which define the necessary inquiries and subjects of evidence.)

#### **The Decision Below**

In contrast to this, the court below (even citing the *Paramount* case as supposed authority) laid down a rule that foreclosed any further inquiry: It said flatly that "The application of an old patent to a new use is not patentable" (Rec. 491). The decisive effect of this rule,

both in disposing of patentability and in shutting off any weighing of the facts material to the question of invention, is shown by the following further passage:

“Although it is true that the Robinson and Moore patents solved a long standing problem of the art, the only flash of genius to which they can be ascribed is the realization that an existing patent could be applied to a new and perplexing problem. But the observation of a new use in a prior patented device is not patentable; and the mere fact that the inventor did not use his device for that purpose or did not foresee that the purpose might be useful is immaterial” (Rec. 491).

The conflict is apparent. It is clear from this Court's proposition and mode of adjudication that if the former use is not “closely analogous”, and if the new subject is not “plainly indicated by the prior art as an appropriate” one with which to use the old instrumentality, then the resulting new product or process at least *may* be patentable. It makes it a question of invention, decision of which requires just such an assessment of the evidential force of the facts bearing on the capacity of ordinary skill to solve the problem as this court made in the *Paramount* case, with the result there of finding such a plain indication in the existing knowledge as to make the new process there no invention. The rule applied below admits no possibility that any new use may be patentable and permits no weighing of the facts of probative value on the question of invention. The majority excluded as “immaterial” and “of no significance” the very facts to which this Court gives high probative force on the question, namely, (1) the fact that the old use did not involve the same problem and purpose (evidencing that it did not reveal the newly utilized capability and did not present an analogy plainly indicative of a solution in common); and (2) the fact that the patentees solved a long standing and perplexing problem which ordinary skill and better had

shown it could not solve (evidencing that no plain indication was actually conveyed by the former use).

The passage already quoted sufficiently shows that the majority below set aside as immaterial the evidence that the patents "solved a long standing problem", and that it set it aside because it thought that the "mere observation of a new use in a prior patented device is not patentable \* \* \*".

With respect to the purpose and the known action and effect of the helical thread in Roberts, the fact that the differences were set aside as immaterial on the same ground appears summarily in the passage already quoted (*ante*, p. 11); and to a greater extent in the more detailed discussion of Roberts (Rec. 490).

After comparing the Roberts structure with that of the present patents, the majority agreed that Roberts did not assert the capability of a helical thread to do what it does in the patented combination. It agreed that Roberts' "heavy lead sheathed cable was not subjected to bends or kinks", and that the problem caused by kinking was "not before him". But the majority did not weigh these facts in relation to the question of invention. After going on to the irrelevant (because hindsight) inference that *if* Roberts' cable had been kinked it *would have had* the effect of keeping the paper strips from separating, the majority set the facts aside according to its rule, saying that

"It is of no significance that Roberts made no mention of the particular forces which his binder thread would combat or even that he did not appreciate that the binder thread would prevent separation of the spiral wrapper when subjected to a bending force."

The same idea appears in the succeeding paragraph in the statement:

"But the observation of a new use in a prior patented device is not patentable; and the mere fact



that the inventor did not use his device for that purpose or did not foresee that the purpose might be useful is *immaterial*. \* \* \* The discovery that the Roberts binder thread possesses an unexpected advantage and accomplishes an unexpected result did not entitle Robinson and Moore, *who pointed out that fact*, to a patent. \* \* \* The application of an old patent to a new use is not patentable" (Rec. 491; emphasis added).

It is an extraordinary mode of adjudication which no combination patent can withstand. Like the old "rules" by which patents were sustained without any critical weighing of the evidence for its true probative value on the question of invention, this new rule equally puts the determination of patentability on an arid and artificial basis. Its decisive effect in this case being clear, the case affords a proper occasion for correction in order to restore the course of the patent law to the path on which it had been put by this Court through correction of like errors in the other direction which had gained prevalence in the past.

### **Jurisdiction**

The jurisdiction to issue the writ is founded on Section 240(a) of the Judicial Code, as amended and re-enacted by the Act of February 13, 1925 (28 U. S. Code 347(a); C. 229, Sec. 1; 43 Stat. 928).

The judgment sought to be reviewed was made finally effective on May 28, 1945, by the order (Rec. 502) denying a petition for rehearing of the judgment first entered on April 12, 1945 (Rec. 498).

### **The Questions Presented**

1. In the case of a patent for a combination of elements creating a new and useful manufacture or improvement thereof, where the subject matter may be regarded as involving the new use of an old instrumentality forming one element of the combination, is the patent invalid in law on a rule that the new use of an old instrumentality is not patentable, precluding any inquiry as to its inventiveness, or is the question of patentability to be determined as a question of invention by a judgment as to whether, on the evidence and according to established criteria, the new use and resulting new or improved product were within the reach of ordinary skill or beyond it?

2. If the answer to the first question is that patentability is to be determined as a question of invention, then is the matter claimed in Robinson & Moore patents Nos. 2,222,555 and 2,222,556 an invention?

### **Reasons Relied Upon for Allowance of the Writ**

1. The decision of the court of appeals below is in conflict with the applicable decisions of this Court and is in conflict with decisions of other circuit courts of appeals, notably those of the Circuit Court of Appeals for the Second Circuit, in that it applied to these patents a rule that the new use of an old instrumentality is not patentable and did not determine patentability by a judgment on the evidence as to whether the new use in combination was an invention, but held immaterial the accepted facts of probative force on that question.

2. The error sanctioned and the conflict thus created involve a matter of importance and of wide application in the administration of the patent law.

Wherefore, petitioner respectfully asks that a writ of certiorari be issued to the United States Circuit Court of Appeals for the Third Circuit to review its judgment on the patentability of the subject matter of Robinson & Moore patents Nos. 2,222,555 and 2,222,556, to the end that that judgment may be reversed.

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